

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TITLE OF THE INVENTION: METHOD AND SYSTEM FOR CALCULATING
AND PRESENTING BANKRUPTCY
PREFERENCE PAYMENT DEFENSES

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1 **Field of the Invention**

2 The inventions described herein relate generally to methods and systems for the analysis of
3 preference payments under the Bankruptcy Code of the United States. More specifically, the
4 inventions relate to determining defenses to claims for the return of Preference Payments,
5 particularly the Contemporaneous Exchange for New Value Defense, the Ordinary Course of
6 Business Defense and the Subsequent New Value Defense, and various combinations and
7 permutations of these defenses.

8 **Definition of Terms**

9 The following terms are used in the specification and claims of the patent and are intended
10 to have their broadest meaning as identified below, consistent with the requirements of law:

11 **Assumed Payment Time** - the Payment Time assumed to be the middle of an OCB
12 Protected Range.

13 **CENV** - Contemporaneous Exchange for New Value

14 **Claim** - any manner in which a Claimant seeks to recover Preference Payments including
15 without limitation a lawsuit or demand for recovery of Preference Payments.

16 **Claimant** - one who pursues a Claim including without limitation, a Debtor, a Trustee, a
17 court appointed committee, or a collection firm.

18 **Code** - that section of the United States Code referred to as the Bankruptcy Code, 11 U.S.C.
19 § 101 et seq.

20 **Contemporaneous Exchange for New Value Defense (also referred to as CENV**
21 **Defense)** - the Defense specified in 11 U.S.C. § 547(c)(1) and by law in which a Preference Payment
22 may be retained by a Recipient if the Recipient provides new value to the Debtor
23 contemporaneously with the receipt of the Preference Payment.

1 **Contemporaneous Exchange for New Value Time (also referred to as CENV Time)** -
2 the number of days set by one who applies the CENV Defense that represents the time within which
3 a Preference Payment will be considered to have been made contemporaneously with the Recipient's
4 providing of new value to the debtor, such that Preference Payments whose Payment Times are less
5 than or equal to the CENV Time are protected by the CENV Defense.

6 **Day Spread** - the number of days added to and subtracted from the Assumed Payment Time
7 to provide the lower and upper ends of the OCB Protected Range.

8 **Defense** - a Preference Payment Defense

9 **Demand** - any type of demand or lawsuit, regardless of its name or form, seeking recovery
0 of a Preference Payment or Preference Payments.

1 **Debtor** - an entity that has filed a bankruptcy petition or for whom its creditors has filed a
2 bankruptcy petition. This term also includes multiple debtors whose cases are consolidated and/or
3 filed jointly any Trustee in control of a Debtor's assets.

4 **Exposure** - the amount of a Recipient's liability for a Preference Payment Demand, that is,
5 all Preference Payments unable to be defended and retained by a Recipient by virtue of a Defense.

6 **Historical Average Payment Time** - the average Payment Time for some set period of time
7 prior to the preference period, such as six months, nine months, one year, eighteen months or two
8 years.

9 **Historical Period** - a period prior to the Preference Period that is determined in some
10 manner to represent the historical ordinary course of business payment history of the Debtor to the
11 Recipient.

12 **Invoice** - any expression evidencing the value of goods or services provided to a Debtor.

1 **Invoice Amount** - the value of goods or services for which payment is sought pursuant to
2 that Invoice.

3 **Invoice Date** - the date on which goods or services were provided by a Recipient to a
4 Debtor, which is often, but not need be, the date on an invoice describing the goods or services
5 provided to the Debtor.

6 **Invoice Number** - a reference number on an Invoice that identifies the Invoice.

7 **Line of Data** - any group of data related by any common piece of data such as Reference
8 Number, Invoice Number, Provided Date, Invoice Amount, or Payment Date. In this description,
9 a Line of Data typically consists of a grouping of one Reference Number, Invoice Number, Provided
10 Date, Invoice Amount, and Payment Date (but may exclude pieces of data and include other pieces
11 of data) all relating to the same Preference Payment, Invoice Number, etc. A Line of Data is not
12 limited to pieces of data found in proximity with one another, on the same row in a spreadsheet, or
13 on the same spreadsheet.

14 **New Value Invoice Amount** - an Invoice Amount related to a group of replicated data that
15 was replicated to calculate and display subsequent new value provided when combining and
16 applying the OCB and SNV Defenses.

17 **New Value Invoice Number** - an Invoice Number related to a group of replicated data that
18 was replicated to calculate and display subsequent new value provided when combining and
19 applying the OCB and SNV Defenses.

20 **New Value Payment Date** - a Payment Date related to a group of replicated data that was
21 replicated to calculate and display subsequent new value provided when combining and applying
22 the OCB and SNV Defenses.

1 **New Value Payment Time** - a Payment Time related to a group of replicated data that was
2 replicated to calculate and display subsequent new value provided when combining and applying
3 the OCB and SNV Defenses.

4 **New Value Provided Date** - a Provided Date related to a group of replicated data that was
5 replicated to calculate and display subsequent new value provided when combining and applying
6 the OCB and SNV Defenses.

7 **New Value Reference Number** a Reference Number related to a group of replicated data
8 that was replicated to calculate and display subsequent new value provided when combining and
9 applying the OCB and SNV Defenses.

0 **OCB** - Ordinary Course of Business.

1 **Ordinary Course of Business (also referred to as Ordinary Course; OCB)** - the way,
2 including the methods, manners, terms, etc., by which a Debtor regularly conducts its business as
3 OCB is clarified and defined by 11 U.S.C. § 547(c)(2) and by pertinent law.

4 **Ordinary Course of Business Defense (also referred to as Ordinary Course Defense;**
5 **OCB Defense)** - the Defense specified in 11 U.S.C. § 547(c)(2) and further defined by law in which
6 a Preference Payment may be retained by a Recipient if the Preference Payment was made within
7 the ordinary course of business.

8 **Ordinary Course of Business Protected Range (also referred to as OCB Protected**
9 **Range)** - that range of Payment Times that indicates the range within which a Preference Payment
0 must be received in order to be protected by the OCB Defense.

1 **Payment Date** - the date on which a Debtor is deemed to have made a payment for the goods
2 or services related to a particular Invoice or to particular goods or services provided to the Debtor.
3 In the case of a Debtor's payment by check, the United States Supreme Court, in certain

1 circumstances, has held that the Payment Date is the date the bank honors the check, not the date
2 the Recipient receives the check. Because it is much easier to determine when a Recipient receives
3 a check than to determine when the bank honors the check, typical practice is to use the date the
4 Recipient receives the check rather than the date of honor as the Payment Date. It is contemplated
5 that different definitions of Payment Date, such as, but not limited to, the date a Recipient receives
6 a check or the date the bank honors the check, may be used in the inventions.

7 **Payment Time** - the number of days from the Provided Date to the Payment Date and
8 typically calculated by subtracting the Provided Date from the Payment Date.

9 **Payment Time Range** - the range between the lowest Payment Time and the highest
10 Payment Time in a period of time such as a Historical Period or the Preference Period.

11 **Preference Payment** - a payment made by a Debtor and received by a Recipient, the receipt
12 of which falls within the Preference Period. Preference Payment includes the plural Preference
13 Payments. The plural term Preference Payments encompasses the singular term Preference
14 Payment.

15 **Preference Payment Date** - the date on which a Debtor makes a Preference Payment for
16 the goods or services related to a Invoice or to particular goods or services provided to the Debtor.
17 In the case of a Debtor's payment by check, the Payment Date has been held by the United States
18 Supreme Court to be the date the check is honored by a bank, not the date the Recipient received the
19 check. Because it is much easier to determine the date a check was received than determining when
20 it cleared the bank, typical practice is to use the check's receipt date rather than the date of honor as
21 the Payment Date. It is contemplated that different definitions of Preference Payment Date, such
22 as the date a Recipient receives a check or the date the check is honored, are recognized by these
23 inventions.

1 **Preference Payment Defense** - any method or manner of reducing a Recipient's Exposure
2 specified in the Code, specifically recognized by law or otherwise, including without limitation the
3 defenses to Demands to recover Preference Payments specified 11 U.S.C. § 547(c). For example,
4 receiving a payment for goods provided prior to shipping the goods does not result in an antecedent
5 debt to the recipient (one element of a Preference Payment pursuant to 11 U.S.C. § 547(b)).
6 Accordingly, prepayment would fall under the definition of Preference Payment Defense even
7 though it is not one of the specific defenses provided in § 547(c) of the Code.

8 **Preference Period** - the 90-day period prior to the filing of a Debtor's bankruptcy petition.
9 It is contemplated that different definitions of Preference Period, such as the potential different
10 period resulting from applying Bankruptcy Rule 9006(a) and counting 90 days forward from the
11 Preference Payment Date (which may result in a longer than 90-day period if the 90th day counting
12 forward falls on a weekend), are recognized by these inventions.

13 **Preference Period Data** - the data related to Preference Payments or new value provided,
14 including data related to new value provided within the Preference Period which was not paid.

15 **Provided Date** - the date that the Recipient is deemed to have provided goods or services
16 to the Debtor.

17 **Protected Range** - see OCB Protected Range.

18 **Recipient** - one who received a Preference Payment.

19 **Reference Number** - a number or other unique character that is added to a Line of Data in
20 a separate column or by any other method so that when the order of the Lines of Data is changed,
21 a user can find that Line of Data using its Reference Number.

22 **SNV** - Subsequent New Value

1 **Source** - any device, such as computers, laptops, modems, servers, telephones, facsimile
2 machines, photocopiers, computer disk, e-mail, regular mail, express mail, courier mail, courier,
3 Internet, Intranet, LAN, WAN, POTS, PSX, or any device that may be in communication with one
4 or more network connections for receiving data from a server or servers over a network, that has
5 access to appropriate data that is, has been, or can be manipulated into the format described in step
6 110 or any other step, such that the data may be manipulated copied, changed, etc. such that it is in
7 a form that may be input into database(s) or data store(s) and used in the inventions.

8 **Subsequent New Value (also referred to as SNV)** - the value of goods or services provided
9 by a Recipient to a Debtor within the Preference Period that is subsequent to a Preference Payment,
10 as clarified and defined by 11 U.S.C. § 547(c)(4) and by law.

11 **Subsequent New Value Defense (also referred to as SNV Defense)** - the Defense specified
12 in 11 U.S.C. § 547(c)(4) and further defined by law in which a Preference Payment may be retained
13 by a Recipient if the Recipient provides new value in the form of goods or services to the Debtor
14 within the Preference Period subsequent to the Recipient's receipt of a Preference Payment.

15 **Trustee** - one who takes control of a Debtor's assets in a bankruptcy, which may be the
16 debtor-in-possession of its own assets.

17 Where alternative meanings are possible, the broadest meaning is intended. All other words
18 in the claims are intended to be used in the normal, customary usage of grammar and the English
19 language.

20 **Background of the Inventions**

21 One goal of the Code is to fairly distribute the assets of a Debtor to its creditors. The Code
22 sets forth a priority system providing creditors with higher priority to be paid in full from a Debtor's
23 assets or proceeds of a Debtor's assets prior to payment to those creditors with lesser priorities. If

1 there exists any priority class of creditors for which the Debtor's assets are insufficient to pay such
2 claims in full, all creditors with that same priority relationship to the Debtor will be paid from the
3 available assets pro rata, that is, in proportion of the creditor's individual claim to the claims of all
4 creditors entitled to the same priority treatment. Creditors holding lesser priority relationships to
5 the Debtor will receiving nothing.

6 To help achieve the goal of equitable distribution to creditors, the Code provides that a
7 Claimant, may seek to recover Preference Payments for distribution to creditors. Under the Code,
8 it is presumed that during the Preference Period, the Debtor was insolvent and paid certain creditors
9 while failing to pay others. Thus, the Debtor presumably preferred certain creditors over others.
10 In order to more fairly distribute a Debtor's assets to creditors under its priority scheme, the Code
11 allows the Debtor to recover Preference Payments.

12 The Code provides Recipients faced with a Demand several Defenses that allow the
13 Recipient to retain Preference Payments. The three most frequently used defenses are: (1) the
14 Contemporaneous Exchange for New Value Defense in which the Debtor made a Preference
15 Payment that was a substantially contemporaneous exchange for new value provided to the Debtor;
16 (2) the Ordinary Course of Business Defense in which the Preference Payment was made in the
17 ordinary course of business; and (3) the Subsequent New Value Defense in which the creditor
18 provided the Debtor with new value fo the Debtor within the Preference Period and subsequent to
19 receiving a Preference Payment.

Contemporaneous Exchange for New Value Defense

Utilizing the CENV Defense typically entails examining four pieces of data for each Invoice that was paid with a Preference Payment: (1) the Invoice Number; (2) the Provided Date; (3) the Invoice Amount; and (4) the Payment Date.

The Provided Date is typically assumed to be the Invoice Date. However, if goods are not shipped or services are not provided on the Invoice Date, a date other than the Invoice Date may be used as the Provided Date. For example, if a Recipient's business practice is to invoice product two days after shipment, then the date two days prior to that Recipient's Invoice Date could be deemed to be the Provided Date. Similarly, if a service provider such as a staffing company invoices its services on the last day of each two-week period, then the Provided Dates could be each day service was provided during that two-week period. In that case, the cost of the services on the invoice could be apportioned to each day service was provided.

To determine whether the CENV Defense applies, one must determine the time period that represents a contemporaneous exchange. The Recipient often determines, without consultation with the Debtor or Trustee, the CENV Time in order to calculate the Contemporaneous Exchange Defense. If that initial assumption regarding CENV Time changes through consultation with the Trustee, by a bankruptcy judge's determination, or for any other reason, the amounts protected by the CENV Defense may change. Changes in the Exposure after applying the CENV Defense will necessitate the recalculation of other Defenses, such as the Ordinary Course and Subsequent New Value Defenses, in order to determine a Recipient's Exposure.

Often a Debtor will argue that the CENV Time is zero, that is, that a Debtor's payment to a Recipient must be made on the same day that the product or services were provided in order to be a contemporaneous exchange. A Recipient may be able to convince the Debtor (or judge) that the

1 Preference Payments were made contemporaneously with the providing of new value to the Debtor
2 if the CENV Time were higher than zero days, such as three days. The Preference Payments
3 deemed to be exchanged contemporaneously for new value are protected by the CENV Defense.

4 Ideally, such protected Preference Payments should be removed from the existing data such
5 that the remaining data does not include those Preference Payments protected by the CENV
6 Defense. Other Defenses can then be applied to the remaining data. However, removal of the
7 Preference Payments protected by the CENV Defense is typically performed manually. Thus, one
8 may fail to recognize and remove all Preference Payments whose Payment Times indicate a
9 contemporaneous exchange, especially with large amounts of data. Those Preference Payments not
10 removed remain in the data and, unless other Defenses apply, contribute to the Recipient's Exposure.
11 Therefore it is a known problem in the art that the manual removal of protected Preference
12 Payments, regardless of which Defense protects the Preference Payment, results in errors that may
13 erroneously increase Exposure.

14 **Ordinary Course of Business Defense**

15 Another defense that may be applied is the OCB Defense. The OCB Defense provides that
16 a Recipient may retain a Preference Payment made in the ordinary course of business. Applying this
17 defense typically entails determining the OCB Protected Range, which is a range of Payment Times
18 such that, if a Payment Time for a particular Preference Payment falls within that OCB Protected
19 Range, the Preference Payment is deemed to have been made within the OCB and is protected by
20 the OCB Defense.

21 The first step in determining the OCB Protected Range is determining an Assumed Payment
22 Time, which is the Payment Time assumed to be the middle of the OCB Protected Range. Often the
23 Historical Average Payment Time is used as the Assumed Payment Time. Often removed from the

1 Historical Period data used in calculating the Historical Average Payment Time are those Payment
2 Times that are deemed to be anomalies or the data related to those payments known to have been
3 made outside the OCB, such as payments made in a Payment Time greater than a certain number
4 of days, such as 100, payments made in a Payment Time less than a certain number of days, such
5 as 20, or payments known to have been made outside the OCB such as a one-time contract with the
6 creditor paid on different payment terms, invoices that are known to have been delayed due to
7 misplacement, or invoices that were disputed and paid only after negotiation. Conventionally,
8 manipulation of Historical Period data and the Historical Average Payment Time calculations are
9 performed manually.

0 Assumptions as to which payments should be removed from the Historical Period data are
1 typically made by the Recipient, Trustee, Debtor or whoever is calculating the Historical Average
2 Payment Time without discussion or agreement with the other party to the Claim. A change in
3 initial assumptions regarding which data to include in the Historical Period data, due to negotiation,
4 as more information regarding those payments becomes available, pursuant to a judge's order, or for
5 any other reason, necessitates removal of certain data from the Historical Period data, which may
6 change the Historical Average Payment Time. Changing the Historical Average Payment Time will
7 likely change the Assumed Payment Time and necessitates recalculating the OCB Defense and any
8 other subsequently-applied Defenses, a time consuming and costly process. Therefore it is a known
9 problem in the art that changes in Historical Average Payment Times and Assumed Payment Times
10 lead to iterative calculation processes which are expensive and time consuming.

11 Once the Assumed Payment Time is determined, the Protected Range must be determined.
12 To determine the Protected Range, one must first determine the Day Spread, which is the number
13 of days added to and subtracted from the Assumed Payment Time to provide the lower and upper

1 bounds of the OCB Protected Range. For instance, if the Assumed Payment Time is 44 days and
2 it is determined that the appropriate Day Spread is 3 days, one would add 3 to, and subtract 3 from,
3 the Assumed Payment Time to conclude that the OCB Protected Range is from 41 to 47 days. In
4 other words, based on an Assumed Payment Time of 44 and a Day Spread of 3, those preference
5 payments made between 41 to 47 days are protected by the OCB Defense, assuming no other
6 circumstances indicate that such payments were made outside the OCB.

7 The next step typically requires removing the Preference Payments made within the
8 Protected Range from the Preference Period Data and adding those Preference Payments not
9 protected by the OCB Defense to determine the Recipient's Exposure. Removing the Preference
10 Payments protected by the OCB Defense is often performed manually by typing or re-typing the
11 Preference Period Data in a text format excluding those Preference Payments protected by the OCB
12 Defense, removing from a previously-typed text format those Preference Payments protected by the
13 OCB Defense, or, if the Preference Period Data is in a spreadsheet format, electronically cutting
14 those Preference Payments protected by the OCB Defense out of the Preference Period Data.

15 Manually removing Preference Payments made within the OCB Protected Range is time
16 consuming and prone to human error. If the Assumed Payment Time is changed through negotiation
17 with the Trustee, because of new information regarding the data, or for any other reason, one must
18 calculate a new OCB Protected Range, remove the Preference Payments made within the OCB
19 Protected Range from the Preference Period Data, and recalculate the Recipient's Exposure by
20 adding those Preference Payments not made within the OCB Protected Range. If the Day Spread
21 is changed through negotiation with the Trustee, because of new information regarding the data, or
22 for any other reason, one must calculate a new Protected Range, remove the Preference Payments
23 made within the OCB Protected Range from the Preference Period Data, and recalculate the

1 Recipient's Exposure by adding those Preference Payments not made within the OCB Protected
2 Range. Often, the resulting data after application of the OCB Defense is not reconciled with the
3 original data to verify that the result is based on correct data. Therefore it is a known problem in the
4 art that such recalculations and reconciliations are prone to human error, time consuming, and
5 typically performed by attorneys at a substantial cost to the Recipient.

6 Subsequent New Value Defense

7 Another Defense typically applied is the SNV Defense, which provides that Preference
8 Payments may be retained if after a Preference Payment is made, the creditor provides subsequent
9 new value to the Debtor on account of which the Debtor did not make an otherwise unavoidable
0 transfer to or for the benefit of such creditor. In other words, if a Recipient receives a preference
1 payment of \$1,000 then subsequently provides \$800 worth of goods or services to the Debtor within
2 the Preference Period, the Recipient may retain \$800 of the \$1,000 Preference Payment. If the
3 Debtor or Trustee does not pay for the SNV, the SNV Defense will apply. Some jurisdictions,
4 however, appear to hold that the SNV must remain unpaid by the Debtor in order for the SNV
5 Defense to apply, and the inventions can apply either interpretation.

6 Calculation of the SNV Defense typically entails sorting Preference Period Data, including
7 the Invoice Number, Provided Date, Invoice Amount, and Payment Date of each Preference
8 Payment, by Payment Date in ascending order. A second set of data including Invoice Number,
9 Provided Date, Invoice Amount, and Payment Date for each Provided Date falling within the
0 Preference Period is then sorted by Provided Date in ascending order. The second set of data is then
1 merged with the sorted Preference Period Data so that the Payment Dates of the Preference Period
2 Data and the Provided Dates of the second set of data are arranged in ascending chronological order.
3 Typically, Payment Dates that are the same as Provided Dates precede the Provided Date, but the

1 inventions contemplate that Provided Dates made on the same day as a Payment Date can be
2 assumed to occur chronologically prior to the Payment Date.

3 Using the combined data sorted by Payment Date and Provided Date, beginning with the first
4 Preference Payment, Preference Payments from the Preference Period Data are added together in
5 chronological order and Invoice Amounts from the second set of data (the subsequent new value
6 provided data or replicated data) are subtracted in chronological order so that a running total of the
7 Recipient's Exposure is kept. The final Exposure number will be the Recipient's Exposure after
8 application of the SNV Defense. It is generally understood that a Recipient's Exposure cannot
9 decrease below zero, but the inventions contemplate that, optionally, an assumption may be made
10 that a Recipient's Exposure may decrease below zero.

11 Currently used processes of applying the SNV Defense include manual manipulation of data
12 and manual calculation. For example, if an electronic text or electronic spreadsheet format is used
13 for manipulating and displaying the data, which are the typical methods, sorting the Preference
14 Period Data by Payment Date and sorting the second set of data by Provided Date are typically
15 performed manually by typing, re-typing, or inserting by cutting and pasting the data in the preferred
16 order. Merging the two data sets typically includes manually inserting blank rows into one data set,
17 cutting data from the other data set and inserting it into the first data set so that the two data sets are
18 combined in the proper order. Moreover, the calculations of a Recipient's Exposure are often
19 performed with an exterior device, such as a hand held calculator, and the resulting calculation is
20 inserted into the data.

21 It is a known problem in the art that manually sorting, manipulating, and performing
22 calculations on the data is time consuming and prone to human error. If any of the data is changed
23 through negotiation with the Trustee, because new information regarding the data is discovered or

1 for any other reason, the data must be sorted again, the two data sets must be merged together again,
2 and the Exposure calculations must be performed again. Often, the resulting data after application
3 of the OCB Defense is not reconciled with the original data to verify that the calculations were
4 correct.

5 **Concurrent Analysis of the OCB and SNV Defenses**

6 If the OCB Defense and SNV Defense are both applicable to a Recipient's Preference
7 Payments, those defenses must be applied at the same time and in the same analysis. Applying the
8 two Defenses separately and adding the two separate Exposures may result in the Recipient's
9 Exposure being reduced by the same Preference Payment twice, once through each Defense. It is
10 generally understood that such dual reduction of Exposure is incorrect under the Code, but some
11 believe it is acceptable, and the inventions can accommodate either theory.

12 When both the OCB and the SNV Defenses apply to a Recipient's Preference Payments, the
13 Recipient's Exposure is often estimated by combining in some way the Exposures resulting from
14 applying the two Defenses separately, but not by combining and calculating the two Defenses in a
15 single analysis. Those analyses that combine the two Defenses often do so by manually sorting two
16 sets of data that include the Invoice Number, Invoice Amount, Provided Date and Payment Date for
17 each Preference Payment by Payment Date as if one were conducting the SNV Defense, determining
18 whether each Preference Payment is, in whole or part, protected by the OCB or SNV Defense, and
19 keeping a running total of the Exposure.

20 Therefore, it is a known problem in the art that, to the extent that the data of each Preference
21 Payment is analyzed individually and manually to determine which Defense may apply, this process
22 is time consuming and prone to human error. Like the OCB Defense, changes to the Assumed
23 Payment Time or Day Spread cannot be made without re-examining each Preference Payment to see

1 if it falls within the new OCB Protected Range and is protected by the OCB Defense. Like the SNV
2 Defense, the combination of the OCB and SNV Defenses typically includes manually sorting,
3 manipulating, and performing calculations on the data and must be repeated if any data changes
4 through negotiation with the Trustee, modified legal assumptions, because new information
5 regarding the data is uncovered, or for any other reason. Often, the resulting data after application
6 of the OCB and SNV Defenses is not reconciled with the original data to verify that the data
7 manipulations and calculations were correct.

8 The Preference Period Data may range from a few Preference Payments to several hundred
9 or more. Even if only a few Preference Payments were made, manual manipulations are time
10 consuming and prone to human error, especially if the final output is not reconciled with the initial
11 data to verify that all data has been included in the analysis. Even if only a few Preference Payments
12 were made, a manually calculated analysis only recognizes one Assumed Payment Time and one
13 Day Spread for the OCB Defense portion of the analysis. Changing either assumption for any
14 reason requires calculation of another whole analysis.

15 For each Preference Payment Defense calculation, it is a known problem that current formats
16 used to present resulting data are difficult to understand, explain to clients or other parties, or use
17 in negotiations. The current methods of calculating Defenses fail to provide any mechanism to
18 verify that the resulting (or output) data ties to the original (or input) data. Current methods of
19 presenting resulting data fail to provide a mechanism for electronically searching for pieces of data
20 such as Invoice Numbers or Preference Payments Dates.

21 Thus, there is a need in the art for more accurate, more reliable, more cost effective, and
22 more automated systems and methods for analyzing a Recipient's Preference Payment Defenses.

1 Further, there is a need in the art for systems and methods that present the results of Preference
2 Payment Defense analyses in formats that are easy to read and explain to others.

3 Summary of the Inventions

4 Software enabled, automated or semi-automated methods and systems for calculating a
5 Recipient's Exposure to a Claim for recovery of Preference Payments pursuant to the United States
6 Bankruptcy Code (11 U.S.C. § 547(b)) after applying, and combining when appropriate, Defenses
7 to such Claim, such as the CENV Defense (11 U.S.C. § 547(c)(1)), OCB Defense (11 U.S.C. §
8 547(c)(2)), and the SNV Defense (11 U.S.C. § 547(c)(4)), and presenting the results, is disclosed.
9 It should be noted that the sections of the Code specifically cited in this disclosure were correct at
10 the time of filing of this application. As with most regulatory code, it is to be expected that newer
11 revisions of the Code may result in changes to section, chapter or paragraph numbering.

12 To apply the CENV Defense, one begins by setting a CENV Time at or below which it is
13 presumed that a Recipient's provision of goods or services to a Debtor was made contemporaneously
14 with the Preference Payment Date. The inventions allow for formulaic calculation of the Payment
15 Time of Preference Payments, which eliminates the human error and time associated with
16 determining the Payment Time manually. The inventions allow for automatic removal from the data
17 all Preference Payments whose Payment Times equal or are less than the CENV Time. Summing
18 the remaining Preference Payments will demonstrate the Recipient's Exposure after the CENV
19 Defense is applied.

20 Current methods of applying the CENV Defense do not allow the CENV Time or the original
21 data to be easily changed. If a Recipient originally set a CENV Time at 1 day, but then wanted to
22 determine its Exposure if the CENV Time was 4 days, or if any of the original data were altered, the
23 change would require manually comparing the new CENV Time with the Payment Times of the

1 Preference Payments to determine which Preference Payments were made contemporaneously,
2 manual removal of those protected Preference Payments, and recalculation of the Exposure. The
3 inventions' automated method of comparing the CENV Time with the Payment Times of the
4 Preference Payments and removing Preference Payments protected by the CENV Defense without
5 manual data manipulation allows numerous assumptions as to CENV Times to be made and the
6 Exposure results quickly and accurately determined. For each CENV Time used, the inventions also
7 create a new data set of Preference Payments so that other Defenses may be applied to those
8 Preference Payments not protected by the CENV Defense.

9 The inventions contemplate presenting resulting data in a desirable format. While other
10 formats are contemplated by the inventions, it is foreseen that the preferred presentation format after
11 the CENV Defense is applied is one that separates those Preference Payments protected by the
12 CENV Defense from those that are not so protected. The amounts of the Preference Payments in
13 each of the two resulting data sets are totaled and then the two totals are added together such that
14 the total of all Preference Payments can be reconciled to the original Preference Period Data. The
15 ability to reconcile the total amount of the Preference Payments after applying the CENV Defense
16 with the original amounts of the Preference Payments is an improvement over the current methods.

17 Using the inventions, the calculation of the OCB Defense may provide numerous Exposure
18 results based on different assumptions regarding the Assumed Payment Time and the Day Spread.
19 This improves upon the current method which calculates one Exposure result given one assumption
20 as to the appropriate Assumed Payment Time and another assumption as to the appropriate Day
21 Spread. Using numerous Assumed Payment Times and Day Spreads is preferable to using one of
22 each because if the Claimant disagrees with the OCB Protected Range, another analysis must be
23 performed, and if the analysis is performed manually, time and money is spent. The inventions can

1 automatically calculate Exposures, either sequentially or simultaneously, assuming a wide variety
2 of OCB Protected Ranges, which would hopefully include all OCB Protected Ranges that a Claimant
3 would advocate. For example, if a Recipient believes that the appropriate Assumed Payment Time
4 is 42 days and the appropriate Day Spread is 5 days, the inventions can calculate Exposure results
5 assuming Day Spreads from 0 to 10 days for Assumed Payment Times ranging from 37-47 days.
6 Accordingly, if the Claimant proposes that an Assumed Payment Time of 46 days and a Day Spread
7 of 3 days should be used, the inventions have already provided the Exposure result for those
8 assumptions and the Recipient can negotiate accordingly by arguing that either the Assumed
9 Payment Time or the Day Spread or both should be different. Without the inventions, different OCB
10 analyses would need to be calculated for each set of assumptions as to Assumed Payment Time and
11 Day Spread. The results of the inventions show how each day change in Assumed Payment Time
12 and each day change in Day Spread affect the Recipient's Exposure. The current methods do not
13 provide such comprehensive results and thus hamper a Recipient's or a Claimant's ability to
14 understand how different assumptions affect Exposure, which is necessary in negotiations.

15 The inventions further contemplate automated or semi-automated calculation of the SNV
16 Defense. The inventions allow for automatic sorting, arranging and manipulating the Preference
17 Period Data and other data such that a Recipient's providing of new value to the Debtor after a
18 Preference Payment is received is automatically recognized, those Preference Payments protected
19 by the SNV Defense are excluded from the Exposure result, and the total Exposure after the SNV
20 Defense is calculated without manual manipulation or manual calculation. The inventions'
21 automated method of calculating the Exposure after applying the SNV Defense is quick and
22 accurate.

1 The inventions further contemplate combining the SNV and OCB Defenses and providing
2 numerous Exposure results based on different assumptions regarding the Assumed Payment Time
3 and the Day Spread. The automatic calculations that combine these two Defenses improve upon the
4 prior methods as prior methods often fail to combine the two Defenses or require the manual
5 manipulation of data or manual calculations to combine these two Defenses. The inventions also
6 improve upon the current methods of combining these two Defenses in that other existing methods
7 typically calculate one Exposure result given one assumption as to the appropriate Assumed
8 Payment Time and another assumption as to the appropriate Day Spread. Using numerous Assumed
9 Payment Times and Day Spreads is preferable to using one of each because if the Claimant disagrees
10 with the OCB Protected Range, another analysis must be performed, and if the analysis is performed
11 manually, time and money is spent.

12 The inventions can combine the SNV and OCB Defenses automatically and calculate
13 Exposures assuming a wide variety of OCB Protected Ranges, which would include all OCB
14 Protected Ranges that a Claimant would advocate. For example, if both the OCB and SNV Defenses
15 apply, and if a Recipient believes that the appropriate Assumed Payment Time is 42 days and the
16 appropriate Day Spread is 5 days, the inventions can calculate Exposure results applying and
17 combining both the SNV and OCB Defenses and assuming Day Spreads from 0 to 10 days for
18 Assumed Payment Times ranging from 37-47 days. Accordingly, if the Claimant proposes that an
19 Assumed Payment Time of 46 days and a Day Spread of 3 days should be used, the inventions have
20 already calculated the Exposure result for those assumptions and the Recipient can negotiate
21 accordingly by arguing that either the Assumed Payment Time or the Day Spread or both should be
22 different. Without the inventions, different analyses combining the OCB and SNV Defenses would
23 need to be calculated for each set of assumptions as to Assumed Payment Time and Day Spread.

1 The results of the inventions show how each day change in Assumed Payment Time and each day
2 change in Day Spread affect the Recipient's Exposure. The results of each analysis will
3 automatically be provided in a two-dimensional chart for easy reference, one variable being the
4 Assumed Payment Time and the other variable being the Day Spread. The current methods do not
5 provide such comprehensive results and thus hamper a Recipient's or a Claimant's ability to
6 understand how changes in assumptions affect Exposure, which is necessary in negotiations.

7 The inventions improve upon existing art by providing, for each Assumed Payment Date and
8 for each assumed Day Spread, a comprehensive final product that is easily reconciled with the
9 separate Defense calculations to ensure that the resulting data is correct, provides a running total of
10 Exposure, which is decreased as either the OCB or SNV Defenses are applied, clearly indicates
11 which Preference Payments are subject to which Defense, allows for any single Preference Payment
12 to be subject to both Defenses if appropriate, totals the amounts of OCB and SNV Defenses used
13 in the analysis, and provides that the Exposure shall not fall below zero.

14 Features and benefits of the present inventions include the following: (1) elimination of
15 manual manipulations of data when calculating Defenses; (2) elimination of manual calculations
16 when calculating Defenses and Exposure; (3) provides resulting data in formats easy to understand,
17 explain to clients or other parties, and use in negotiations; (4) properly combines the OCB Defense
18 and the SNV Defense; (5) properly shows which one or both of the OCB and SNV Defenses apply
19 to a particular Preference Payment and to what extent; (6) provides a mechanism to verify that the
20 resulting (or output) data ties to the original (or input) data; (7) provides a mechanism for
21 electronically searching for pieces of data such as Invoice Numbers or Preference Payment Dates;
22 (8) changes to original (or input) data or changes in assumptions related to Defenses do not result
23 in time consuming, costly, error-prone manual recalculation of Defenses and the Recipient's

Exposure as such changes in assumptions are contemplated by the inventions or are easily input so that the results can be calculated accurately and quickly.

Brief Description of the Drawings

Fig. 1 depicts a block diagram illustrating a method for calculating Exposure for return of Preference Payments considering the CENV, OCB and SNV Defenses, either alone or in combination;

Fig. 2 depicts a block diagram illustrating a preferred embodiment for the preliminary manipulations of initial data into usable raw data of **Fig. 1**.

Fig. 3 depicts a block diagram illustrating a preferred embodiment for calculating the CENV Defense of **Fig. 1**.

Fig. 4 depicts a block diagram illustrating a preferred embodiment for calculating Average Payment Times and Payment Time Ranges for the Pre-Preference and Preference Periods of **Fig. 1**.

Fig. 5 depicts a block diagram illustrating a preferred embodiment for calculating the OCB Defense of **Fig. 1**.

Fig. 6 depicts a block diagram illustrating a preferred embodiment for calculating the Subsequent New Value Defense of **Fig. 1**.

Fig. 7 depicts a block diagram illustrating a preferred embodiment for calculating the application of both the OCB and SNV Defenses.

Fig. 8 depicts a presentation of initial data in general terms.

Fig. 9 depicts a presentation of initial data using sample actual values.

Fig. 10 depicts a new device figure.

1 **Fig. 11** depicts a presentation of initial data sorted by Invoice Number and calculating
2 Payment Times in general terms.

3 **Fig. 12** depicts a presentation of initial data sorted by Invoice Number and indicating a
4 formula for calculating Payment Times.

5 **Fig. 13** depicts a presentation of initial data sorted by Invoice Number and calculating
6 Payment Times using sample actual values.

7 **Figs. 14 and 14(a)** depict a presentation of data sorted by Payment Date and split into pre-
8 Preference and Preference Periods using sample actual values.

9 **Figs. 15 and 15(a)** depict a presentation of data sorted by Payment Date, determination of
10 Payment Time Range and calculation of average Payment Time with payments known to have been
11 made outside the ordinary course of business removed and the data split into pre-Preference and
12 Preference Periods using sample actual values.

13 **Fig. 16** depicts a comparison of Payment Time Averages and Payment Time Ranges for the
14 pre-Preference and Preference Periods.

15 **Fig. 17** depicts a presentation of Preference Period Data after applying the OCB Defense in
16 general terms.

17 **Fig. 18** depicts a presentation of Preference Period Data after applying the OCB Defense
18 displaying formulas.

19 **Fig. 19** depicts a presentation of Preference Period Data after applying the OCB Defense
20 using sample actual values.

21 **Fig. 20** depicts a presentation of Preference Period Data after applying the SNV Defense in
22 general terms.

1 **Fig. 21** depicts a presentation of Preference Period Data after applying the SNV Defense
2 displaying formulas.

3 **Fig. 22** depicts a presentation of Preference Period Data and Exposure after applying the
4 SNV Defense using sample actual values.

5 **Fig. 22(a)** depicts an alternative method of displaying a full presentation of Preference Period
6 Data after applying the SNV Defense using sample actual values where the original data related to
7 Preference Payment Dates and the replicated data related to New Value Provided Dates
8 are separated and New Value Available is not shown until after the date the first Preference Payment
9 was made.

10 **Fig. 23** depicts a presentation of Preference Period Data after combining and applying the
11 OCB and SNV Defenses in general terms.

12 **Fig. 24** depicts the original data (related to Preference Payments) to be used in combining
13 and applying the OCB and SNV Defenses, the total Invoice Amounts of which will equal the total
14 Invoice Amounts in an analysis, such as in **Figs. 26(a), 26(b), and 26(c)**.

15 **Fig. 25** depicts the replicated data (related to Subsequent New Value) to be used in
16 combining and applying the OCB and SNV Defenses, the total Invoice Amounts of which will equal
17 the total New Value Invoice Amounts in an analysis, such as in **Figs. 26(a), 26(b), and 26(c)**.

18 **Fig. 26(a)** depicts a presentation of Preference Period Data after combining and applying the
19 OCB and SNV Defenses using sample actual values and assuming an Assumed Payment Time of
20 49 days and a Day Spread of 5 days.

21 **Fig. 26(b)** depicts a presentation of Preference Period Data after combining and applying the
22 OCB and SNV Defenses using sample actual values and assuming an Assumed Payment Time of
23 44 days and a Day Spread of 3 days.

1 **Fig. 26(c)** depicts a presentation of Preference Period Data after combining and applying the
2 OCB and SNV Defenses using sample actual values and assuming an Assumed Payment Time of
3 48 days and a Day Spread of 10 days.

4 **Fig. 27** depicts a partial presentation of the Exposure resulting from each combination of
5 OCB and SNV Defenses for each assumption of Assumed Payment Time and Day Spread in a two-
6 dimensional chart (the values being pulled from the results of applying each set of assumptions)
7 using sample actual values.

8 **Detailed Description of Preferred Embodiments**

9 Set forth below is a description of what is currently believed to be the preferred embodiments
10 or best examples of the claimed inventions. Future and present alternatives and modifications to the
11 preferred embodiments are contemplated. Any alternatives or modifications which make
12 insubstantial changes in function, in purpose, in structure or in result are intended to be covered by
13 the claims of this patent. Any other specific alternative scenarios that may occur in a bankruptcy
14 or workout setting that may affect the initial or modified data not specifically referenced are
15 intended to be covered by the claims of this patent. Recovery of Preference Payments necessarily
16 requires interpretation of the Code, judicial opinions and other legal memoranda. Novel or little-
17 used interpretations may present themselves from time to time. Alternative interpretations or
18 theories affecting any aspect of Preference Payment recovery are intended to be covered by the
19 claims of this patent.

20 **Devices**

21 As shown in **Fig. 10**, it is contemplated that the system embodiments of the invention include
22 one or more Sources **11**, one or more Input/Output (I/O) Devices **12**, a Processor **13** and a Memory
23 **14**. It is contemplated that the inventions will utilize a format and type of data processing media **16**

1 that allows for data input, manipulation, calculation and output display required by the inventions.
2 It is contemplated that the data processing media 16 may be an electronic spreadsheet 17 so that data
3 may be inserted into the inventions, manipulated, used in calculations and displayed in any
4 appropriate manner. However, it is also contemplated that inserting the data need not be into an
5 electronic spreadsheet 17 , but may be into any data processing media 16 such as a database 18,
6 software storage device 19, hardware storage device 21, computer 22, calculator 23 or other means
7 as are known in the art that allow the manipulations, calculations and output display required by the
8 inventions. Accordingly, the data processing media 16 need not be in column/row format where
9 each Line of Data 102 corresponds to one Preference Payment received by the Recipient (or any
10 Invoice or portion thereof is unpaid, any one Invoice Number 111, Invoice Amount 112 or Provided
11 Date 113), but may be in any format that allows the data to be manipulated, calculations to be
12 performed and the results to be displayed. I/O Devices 12 may be in communication with a network
13 or may be in direct communication with a Source 11. I/O Devices 12 provide means for entering
14 data into, and transmitting data from, processor 13 and memory 14. Data received by I/O Devices
15 12 may be immediately accessible by processor 13 or may be stored in memory 14.

16 **Preliminary Manipulations of Raw Data**

17 **Fig. 1** depicts a block diagram illustrating a method for analyzing Preference Payment
18 Defenses according to a preferred embodiment of this invention. A Claim is asserted by a Claimant
19 against a Recipient of Preference Payments or another event occurs that requires calculation of
20 Preference Defenses. In response, data is prepared for use in the invention according to a data input
21 step 20. In the data input step, Lines of Data 102 are entered into an electronic spreadsheet 17.
22 Exposure after application of any other Defense or method of reducing Exposure other than the
23 CENV, OCB and SNV Defenses is calculated and results are displayed in a row/column range of

1 spreadsheet. Exposure after application of the CENV Defense is calculated and results are displayed
2 in a row/column range of spreadsheet. Exposure after application of the OCB Defense is calculated
3 and results are displayed in a row/column range of spreadsheet. Exposure after application of the
4 SNV Defense is calculated and results are displayed in a row/column range of spreadsheet.
5 Exposure after application of the combined OCB and SNV Defenses is calculated and results are
6 displayed in a row/column range of spreadsheet.

7 Fig. 2 depicts a block diagram illustrating the preliminary manipulations of original data
8 needed to use the invention.

9 In data preparation step 110, Recipient, Claimant or other entity prepares the following data
10 (or the data may be imported from any Source 11) in four columns in readable electronic spreadsheet
11 format (or other grouping mechanism that allows a Line of Data 102 to be manipulated), for each
12 payment received by Recipient from the date 820 days (two years plus ninety days) (if such data is
13 available) prior to the bankruptcy filing date through the bankruptcy filing date: Invoice Number
14 111, Invoice Amount 112, Provided Date 113, and Payment Date 114, each four-column set of data
15 being a Line of Data. The Invoice Number 111 may be any alpha/numeric character to represent
16 the Invoice Number. The Invoice Amount 112 may be a value in any known value format,
17 preferably a currency format. The Provided Date 113 may be a date in any known date format. The
18 Payment Date 114 may be a date in any known date format.

19 A depiction of a presentation of initial data in general terms is shown at Fig. 8. A depiction
20 of a presentation of initial data using sample actual values is shown at Fig. 9. It is contemplated that
21 the Provided Date for services may need to be determined by pro rating the value of the services
22 over the number of days the services were provided. Although any method known in the art may
23 be used for this determination, it is contemplated that the user may make such determinations. It

1 is also contemplated that the invention may, by operation of an algorithm, make such determinations
2 if the dates covered by any particular invoice for services are provided, such that the invention can
3 pro rate the amount of the invoice over the dates of service so that all Provided Dates for each
4 invoice are determined.

5 In the Payment Time calculation step 115, for each Line of Data, calculate and display the
6 Payment Time 116. A depiction of a presentation of initial data sorted by Invoice Number 111 and
7 calculating Payment Times 116 in general terms is shown at Fig. 11. The Payment Time 116
8 presents the result of a formula subtracting Provided Date from Payment Time and displaying a
9 result in integer form using any appropriate units of time. A depiction of a presentation of initial
10 data sorted by Invoice Number 111 and calculating Payment Times 116 using sample actual values
11 is shown at Fig. 12.

12 In data sorting step 120, The invention sorts the Invoice Number 111, Invoice Amount 112,
13 Provided Date 113, Payment Date 114 and Payment Time 116 data for each Payment Date 114 by
14 Payment Date 114 in ascending chronological order.

15 In data splitting step 125, the invention splits the data into Preference Period Data and Pre-
16 Preference Period Data. Include in the Pre-Preference Period Data the Invoice Number 111,
17 Invoice Amount 112, Provided Date 113, and Payment Date 114 data of all Provided Dates 113
18 occurring within the Pre-Preference Period , but which were never paid. The splitting function is
19 preferably performed by a sorting feature in the spreadsheet software, but may be done by other
20 manual or automatic methods as are known in the art. Include in the Preference Period Data , the
21 Invoice Number 111, Invoice Amount 112, Provided Date 113, and Payment Date 114 data of all
22 Provided Dates 113 occurring within the Preference Period , but which were not paid, in which case
23 Payment Date would be left blank. A sample of the data after these manipulations for the Pre-

1 Preference Period is shown in Fig. 14. A sample of the data after these manipulations for the
2 Preference Period is shown in Fig. 14(a). The example illustrated in Figs. 14 and 14(a) assumes a
3 hypothetical preference period of April 18, 2001 through July 16, 2001. Lines of data 102 in Fig.
4 14(a) that report no payment date 114 or payment time 116 indicate that no payment was received
5 from the Debtor.

6 It must be determined by the user whether the Invoices represented by Provided Dates 113
7 occurring within the Preference Period but paid after the date of filing of the Debtor's bankruptcy
8 petition should be included in the Preference Period Data, and such determination will likely depend
9 on the likelihood the Recipient will be able to retain the payments made after the date of filing of
10 the Debtor's bankruptcy petition.

11 In an invoice totaling step 130, the invention separately totals the Invoice Amounts 112 for
12 the Pre-Preference Period and the Preference Period, the total for the Preference Period being the
13 total Exposure a Recipient has to a Claim prior to any Defenses being applied.

14 In an invoice reconciliation step 140, the invention adds the total Invoice Amounts 112 for
15 the Pre-Preference Period and the total Invoice Amounts for the Preference Period such that the
16 total of the Invoice Amounts 112 can be reconciled with the total Invoice Amounts 112 from the
17 original data.

18 In display step 150, the invention presents the resulting Pre-Preference Period Data and
19 Preference Period Data in a readable format in ascending order by Payment Date 114.

20 In Preference Payment reconciliation step 160, however, the Preference Period Data may
21 not reconcile with the Preference Payments sought to be recovered by the Claimant. In preference
22 payment reconciliation step 160, a Recipient may choose to try reconcile its data with the
23 Claimant's, which may mean that the Recipient will add or remove those Preference Payments in

1 the Recipient's data so that Recipient's data matches the Claimant's data. The Recipient may also
2 choose not to reconcile the data and conduct the analysis on its unaltered data. The Recipient may
3 also choose to continue two separate analyses, one with the Claimant's Preference Payment data and
4 one with the Recipient's Preference Payment data.

5 **Calculate and Apply Defenses Other than CENV, OCB and SNV Defenses**

6 The step of calculating and applying Defenses other than the CENV, OCB and SNV
7 Defenses 30 may be initiated after the data has been prepared. Other Defenses include demonstrating
8 that one or more of the following elements of a Preference Payment have not been met: (1) a
9 payment that is a transfer (Code § 547(b)); (2) of property of the debtor (Code § 547(b)); (3) to or
10 for the benefit of a creditor (Code § 547(b)(1)); (4) for or on account of an antecedent debt (Code
11 § 547(b)(2)); (5) made while the debtor was insolvent (Code § 547(b)(3), (f); (6) made during the
12 90-day preference period or one year for insiders (Code § 547(b)(4)); and (7) that enables a creditor
13 to receive more than it would have in a hypothetical liquidation under chapter 7 of the Code (Code
14 § 547(b)(5)), or Code-specified defenses such as (1) providing an enabling loan (Code § 547(c)(6));
15 (2) possessing a floating lien (Code § 547(c)(5)); (3) possessing a statutory lien (Code § 547(c)(6));
16 (4) payments for domestic relations debts (Code § 547(c)(7)); and (5) payments for small consumer
17 transfers (Code § 547(c)(8)). Other Defenses may also include any other defense known to those in
18 the art that has not been specifically identified above.

19 **Calculation of Contemporaneous New Value Defense**

20 **Fig. 3** depicts a block diagram illustrating a preferred embodiment for calculating the CENV
21 Defense. In CENV Payment Time selection step 210, one or more CENV Times are chosen.
22 Although any manner of choosing a CENV Time or Times may be used, it is contemplated that the
23 Recipient may determine such CENV Time to be one number such as 2, more than one number such

1 as 0 and 3 or a range of numbers such as 0, 1, 2, and 3. In CENV Payment Time input step , the
2 determined CENV Time or Times are input into the invention by the user. Alternatively, it is
3 contemplated that the invention will prompt the user for such CENV Time or Times .

4 In CENV comparison step 225, the user determines which Preference Payments were made
5 contemporaneously with the Recipient's providing of new value by comparing the Payment Dates
6 114 with the CENV Time .

7 Those Preference Payments that were made contemporaneously with the Recipient's
8 providing of new value are separated from those not made contemporaneously. In CENV data
9 separation step , the invention separates the Invoice Number 111, Invoice Amount 112, Provided
10 Date 113, Payment Date 114 and Payment Time 116 data related to those Preference Payments
11 whose Payment Times 116 are less than or equal to the CENV Time from the Invoice Number 111,
12 Invoice Amount 112, Provided Date 113, Payment Date 114 and Payment time 116 data related to
13 those Preference Payments whose Payment Times 116 are greater than the CENV Time .

14 In CENV result step 240, for each result based on each CENV Time used, the invention adds
15 the Invoice Amounts 112 for those Preference Payments deemed to have been made
16 contemporaneously in exchange for new value, the total of which is the amount protected by the
17 CENV Defense. The invention also adds the Invoice Amounts 112 for those Preference Payments
18 deemed not to have been made contemporaneously in exchange for new value, the total of which
19 is the amount not protected by the CENV Defense and equals the Recipient's Exposure after the
20 application of the CENV Defense.

21 In CENV reconciliation step 250, the invention adds the total amount of Preference
22 Payments protected by the CENV Defense and the total amount of Preference Payments not

1 protected by the CENV Defense so that the total of all Preference Payments can be reconciled with
2 the original data, which can also be presented.

3 In CENV result display step 260, the invention presents the results of the application of the
4 CENV Defense, which include for both the Preference Payments protected by the CENV Defense
5 and the Preference Payments not protected by the CENV Defense, Invoice Number 111, Invoice
6 Amount 112, Provided Date 113, Payment Date 114 and Payment Time 115 in an easily readable
7 format that may also be printed onto paper media.

8 **Calculation of Average Payment Times Within and Prior to Preference Period**

9 **Fig. 4** depicts a block diagram illustrating a preferred embodiment for the step of calculating
10 average payment times 45, including calculating Average Payment Times 303 and Payment Time
11 Ranges 302 for the Pre-Preference and Preference Periods of **Fig. 1**, assuming no Payment Time
12 has been calculated in the preliminary manipulations of original data.

13 In Payment Time calculation step 305, for the Pre-Preference Period data, if it exists, and
14 the Preference Period data, for each Payment Date 114, a Payment Time 116 is calculated.

15 In payment exclusion step 310, for the Pre-Preference Period data, for those payments known
16 to have been made outside the OCB because their Payment Times 116 are too low or too high to be
17 considered to have been paid within the OCB, such Payment Times 116 and related Lines of Data
18 102 (Invoice Date 111, Invoice Amount 112, Provided Date 113, Payment Date 114 and Payment
19 Time 116) are removed. Although any method of removal may be used, it is contemplated that such
20 removal may be executed manually by the Recipient. It is also contemplated that such removal may
21 be performed by defining a lower boundary of Payment Time 116 such that payments made in fewer
22 days than the lower boundary are considered to have been paid outside the OCB, and by defining
23 an upper boundary of Payment Time 116 such that payments made in more days than the upper

1 boundary are considered to have been paid outside the OCB, inputting the lower and upper
2 boundaries of Payment Times into the invention which will remove from the Pre-Preference Period
3 data that data corresponding to those payments made outside the OCB.

4 In exception step 315, for those Provided Dates 113 within the Pre-Preference Period
5 representing goods or services for which no payment was received, those Provided Dates 113 and
6 related Lines of Data 102 (Invoice Date 111, Invoice Amount 112, Provided Date 113, Payment
7 Date 114 and Payment Time 116) are removed from the Pre-Preference Period data. This may be
8 done manually or by the invention, using spreadsheet or database functions as are known in the art.

9 In Pre-Preference removal step 320, for those payments made within the Pre-Preference
10 Period and known to have been made outside the OCB because the manner and/or method by which
11 the payment was made was not within the OCB, those payments and related Lines of Data 102
12 (Invoice Date 111, Invoice Amount 112, Provided Date 113, Payment Date 114 and Payment Time
13 116) are removed. For example, if the Recipient typically received payment from the Debtor by
14 check by mail and the Debtor made one payment in cash by personal delivery, such payment may
15 be deemed to be made outside the OCB. Although any method of removal of payments may be
16 used, it is contemplated that such removal may be executed manually by the Recipient. It is also
17 contemplated that the invention can prepare the Pre-Preference Period data such that the Recipient
18 can easily specify, by, in step 120 or other appropriate step, making a check or placing some sort
19 of other indicator in a column next to any Line of Data 102 or by any other method, which payments
20 and related data should be removed because the payments were not made in the OCB, and the
21 invention will remove the data related to such payments.

1 In Pre-Preference sorting step 330, the invention sorts the remaining Pre-Preference Period
2 data by Payment Date in ascending chronological order. Separate operations are performed on the
3 Pre-Preference Period data and the Preference Period Data .

4 In historical period determination step 335, if Pre-Preference Period data exists, one or more
5 Historical Periods shall be determined. Although any method of determining this Historical Period
6 or Periods may be used, the Recipient can specify any time period from the day prior to the first
7 date of the Preference Period backward in time any number of days, months or years. Typically,
8 periods of nine months, one year, eighteen months or two years prior to the Preference Period are
9 used, but some Recipients do not have such lengthy or applicable history. Alternatively, the
10 invention itself may determine the one or more Historical Periods based on pre-determined formulas
11 for typically used Historical Periods as are known in the art.

12 In Historical Period Average Payment Time calculation step 340, for each Historical Period
13 , the invention calculates the Average Payment Time 303 by adding the Payment Times 116 for each
14 Historical Period and dividing by the number of Payment Times 116. If this result is not an integer,
15 the number may be rounded to the nearest integer.

16 In Historical Period Payment Time Range calculation step 345, for each Historical Period
17 , the invention determines the Payment Time Range 302. Although any method may be used, this
18 can be done by sorting the Historical Period data by Payment Time 116 in chronological order, in
19 which case the first Payment Time 116 in the list of data will be the low end of the Payment Time
20 Range 302 and the last Payment Time 116 in the list will be the high end of the Payment Time
21 Range 302.

22 In Preference Period Average Payment time calculation step 350, for the Preference Period,
23 the invention calculates the Average Payment Time 303 by adding the Payment Times 116 for the

1 Preference Period and dividing by the number of Payment Times 116. If this result is not an integer,
2 the number may be rounded to the nearest integer.

3 In Preference Period Payment Time Range Calculation step 355, for the Preference Period,
4 a Payment Time Range 302 is determined. Although any method may be used, this can be done by
5 sorting the Preference Period data by Payment Time 116 in chronological order, in which case the
6 first Payment Time 116 in the list of data will be the low end of the Payment Time Range 302 and
7 the last Payment Time 116 in the list will be the high end of the Payment Time Range 302.

8 Samples of the output of the data after the above calculations and manipulations using
9 sample actual values for the Pre-Preference Period and Preference Period, respectively, are shown
10 at Figs. 15 and 15(a). In these figures the Preference Period data is sorted by Payment Date 114, the
11 limits of which (after removing outliers) indicate the Payment Time Range 302.

12 In payment time and range comparison step 360, as an indication as to how the Payment
13 Times 116 of the Historical Period(s) correlate to the Preference Period Payment Times 116, the
14 Average Payment Time 303 and Payment Time Range 302 for the Preference Period may be
15 compared to the Average Payment Time 303 and Payment Time Range 302 for each Historical
16 Period. A sample of such comparison is shown at Fig. 16.

17 In Historical Period data display step, it is contemplated that the invention will display, for
18 each Historical Period, the Pre-Preference Period data separated into the Historical Period data and
19 data not falling within the Historical Period. For each Historical Period, the resulting two sets of
20 data will be sorted in an easily understandable format such as each line of data being sorted by
21 Provided Date or Invoice Date or in any other format that displays the appropriate data in an
22 understandable format as is known in the art. The dollar amounts of the payments in the two
23 Historical Period data sets will be summed separately, then added together, then added to the

1 amounts of the Preference Payments so that they may be reconciled with the payments from the
2 original data provided.

3 **Calculation of Ordinary Course of Business Defense**

4 **Fig. 5** depicts a block diagram illustrating a preferred embodiment for the process of
5 calculating the OCB Defense 50 of **Fig. 1**.

6 In OCB data sorting step 410, the Preference Period Data is sorted by Payment Time 116 in
7 ascending chronological order. For this analysis, Preference Period Data includes data related to
8 all Preference Payments, including those removed from the data to determine the Payment Time
9 Range 302 and to calculate the Average Payment Time 303 within the Preference Period.

10 In OCB payment time selection step 420, the Assumed Payment Time, which may be one
11 of the Historical Average Payment Times 303, is used as the middle of OCB Protected Range .
12 Building on the data set created in data preparation step 20, a number of new columns, such as
13 twelve, are created following the existing five columns of data. The first added column displays
14 those Preference Payments protected by the OCB if no OCB Defense applies. Accordingly, in the
15 first added column, no OCB Protected Range applies, and none of the Preference Payments will
16 be shown to be protected in the first added column.

17 In OCB defense calculation step 450, the subsequent added columns display those Preference
18 Payments protected by the OCB Defense if the Day Spread 403 is any number of pre-set or chosen
19 integers, such as 0, 1, 2 or 3. It is contemplated that the other eleven added columns will show the
20 Preference Payments protected by OCB Protected Ranges with Day Spreads 403 from 0 through
21 10 in ascending order so that the data can be easily visualized and understood. To calculate the
22 Preference Payments protected by the OCB Defense, for each added column, the invention indicates
23 the Assumed Payment Time 404, indicates the Day Spread 403, subtracts from the Assumed

1 Payment Time **404** the Day Spread **403** and shows the result as the lower end of the OCB Protected
2 Range , and adds to the Assumed Payment Time **404** the Day Spread **403** and shows the result as
3 the upper end of the OCB Protected Range . For each Preference Payment , the Payment Time **116**
4 is compared to the lower end of the OCB Protected Range and the upper end of the OCB Protected
5 Range and if the Preference Payment is not less than the lower end of the OCB Protected Range
6 and is not greater than the upper end of the OCB Protected Range , the amount of the Preference
7 Payment is copied in that column on that Line of Data **102** corresponding to that Preference
8 Payment . If the Payment Time **116** is less than the lower end of the OCB Protected Range or
9 greater than the upper end of the OCB Protected Range , then 0 is entered in that column on that
10 Line of Data **102** corresponding to that Preference Payment . For example, referring to Fig 19 and
11 using the assumption that twelve columns are added to the existing Preference Period data, the
12 Assumed Payment Time **404** is 49, and the Day Spreads **403** are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10,
13 in the fourth added column, the Day Spread would be 2, the lower end of the OCB Protected Range
14 would be 47, the upper end of the OCB Protected Range would be 51, and the Protected Range
15 would be the 5 days from 47-51 days. The value of those Preference Payments with Payment Times
16 **116** from 47 to 51 days will be copied into that fourth added column and verified by reviewing the
17 Payment Times of those values copied into each column.

18 In OCB reconciliation step **460**, the amounts in the original Invoice Amount **112** column are
19 summed so that they can be reconciled with the previous data set.

20 In OCB exposure calculation step **470**, the zero values input and the Invoice Amounts **112**
21 copied into each of the added columns are summed so that the total of the values in any column
22 indicates the amount of Preference Period Payments protected by the OCB Defense given the
23 Assumed Payment Time and OCB Protected Range corresponding to that column. Each total

1 amount of Preference Payments protected by the OCB Defense is subtracted from the total Invoice
2 Amount 112, the result of which indicates the amount of Preference Period Payments not protected
3 by the OCB Defense, which also equals the Recipient's Exposure after the OCB Defense is applied.

4 In OCB result presentation step 480, the results are displayed in an easily readable and
5 understandable manner according to the display capabilities of the source or otherwise known in the
6 art. Because the Preference Period data is sorted in ascending Payment Time 116 order, the
7 resulting chart of Fig. 19 visually demonstrates how each integral increase in Day Spread 403
8 affects the amount of Preference Payments protected by the OCB Defense.

9 In OCB recalculation step , the OCB Defense may be recalculated using another Assumed
10 Payment Time 404. It is contemplated that the OCB Defense will be recalculated using a spread of
11 Assumed Payment Times 404 of five days above and below the originally chosen Assumed Payment
12 Time 404. For example, if the originally chosen Assumed Payment Time 404 was 46, the OCB
13 Defense would be recalculated using Assumed Payment Times 404 of 41, 42, 43, 44, 45, 47, 48, 49,
14 50, and 51. It is further contemplated that this range of Assumed Payment Times 404 will include
15 the Historical Average Payment Times 303 for all Historical Periods so that results will be provided
16 for all Historical Average Payment Times 303. As seen above, each of the Assumed Payment Times
17 404 (and the column where no Assumed Payment Time 404 is used) will produce 12 results ranging
18 from no OCB protection to protecting a range with a Day Spread 403 up to 10 days, or an OCB
19 Protected Range of 21 days. Accordingly, while any number of Assumed Payment Times 404 and
20 Day Spreads 403 may be calculated, it is contemplated that at least 132 results will be provided. A
21 depiction of a preferred format for the presentation of Preference Period Data after applying the
22 OCB Defense in general terms is shown at Fig. 17. At column G of Fig. 17 a preferred formula for
23 comparing the Payment Time for the Line of Data represented in line 29 to the lower and upper ends

1 of the OCB Protected Range is assuming an Assumed Payment Time of that value at G21 plus and
2 minus the Day Spread at G28 is G29: = IF(+ \$E29 >= G\$22, IF(\$E29 <= G\$23, \$C29, 0), 0). In column
3 I of Fig. 17, a preferred formula for comparing the Payment Time for the Line of Data represented
4 in line 31 to the lower and upper ends of the OCB Protected Range is assuming an Assumed
5 Payment Time of that value at I21 plus and minus the Day Spread at I28 is I31:
6 =IF(+ \$E31 >= I\$22, IF(\$E31 <= I\$23, \$C31, 0), 0). It is contemplated that any spreadsheet based
7 formula (described here or elsewhere in this description of the invention) may be modified to take
8 advantage of absolute cell references. A depiction of a presentation of Preference Period Data after
9 applying the OCB Defense displaying formulas is shown at Fig. 18. A depiction of a display of
10 Preference Period Data after applying the OCB Defense according to the OCB result presentation
11 step 480 is shown at Fig. 19.

12 **Calculate the Subsequent New Value Defense**

13 **Fig. 6 depicts a block diagram illustrating a preferred method for the process of calculating**
14 **the Subsequent New Value Defense 60 of Fig. 1.**

15 In SNV data sorting step 505, using the Preference Period data of Invoice Number 111,
16 Invoice Amount 112, Provided Date 113 and Payment Date 114, sorted by Payment Date 114 in
17 ascending order and including those Lines of Data 102 that represent goods and services provided
18 within the Preference Period but were not paid, the invention creates a new column and numbers
19 each Line of Data 102 in ascending order with a Reference Number 511. The Reference Numbers
20 109 relating to each Preference Payment should be italicized or otherwise distinguishable from the
21 other data for easy reference. This allows a Recipient to track the data related to any Invoice
22 Number 111 by using the Reference Number 109, not the cumbersome Invoice Number 111, which
23 may be difficult to visually distinguish from other Invoice Numbers 111.

1 While any method of calculating the SNV Defense may be used, it is contemplated that the
2 following steps will be used for such calculation.

3 In the SNV data replication step 510, the user copies the above Lines of Data 102 and
4 replicates the data below the original data. Those Lines of Data 102 that represent goods and
5 services provided within the Preference Period but were not paid are removed from the original
6 (non-replicated) data because they were not Preference Payments because the Debtor never paid for
7 those goods or services. The replicated data should be bolded or otherwise distinguishable from the
8 original data for easy reference. The replicated data is reorganized so that the replicated Provided
9 Date (the New Value Provided Date) is lined up in the same column as the original data Payment
10 Date 114 and the other columns of data are placed into three newly created columns following the
11 existing five columns labeled New Value Reference Number 503, New Value Invoice Number 511
12 and New Value Invoice Amount 512.

13 In the SNV data sorting step 520, all existing rows of data are then sorted by the original
14 Payment Date 114/New Value Provided Date column in ascending order so that the New Value
15 Provided Dates and related data (which are bolded) are inserted chronologically into the
16 chronological Payment Dates 114. New Value Provided Dates are placed after Payment Dates 114
17 if such dates are the same, although other assumptions as to which occurred first if both occurred
18 on the same day may be made.

19 In the SNV format step 525, four additional columns are added to the data set. A ninth
20 column, a New Value Available 516 column, is added to the right of all existing columns that, for
21 each Line of replicated Data 102, and the amount of new value provided (which for each Line of
22 Data 102 is the amount from Invoice Amount 112 column) is copied into that ninth column. An

1 tenth column, the New Value Used 517 column, is added that indicates what portion, if any, of the
2 New Value Available 516 can be used by the Recipient to decrease the Recipient's Exposure.

3 An eleventh column, the New Value Not Used 518 column, is added which indicates what
4 portion, if any, of the New Value Available 516 cannot be used by the Recipient to decrease the
5 Recipient's Exposure.

6 A twelfth column, the Exposure After New Value column, is added which indicates the
7 Recipient's Exposure after the SNV Defense is applied.

8 In the SNV calculation step 545, the values of the final three columns added in the SNV
9 format step 525 are calculated from certain algorithms. To calculate the values in the New Value
10 Used column, the New Value Available 516 for any Line of Data 102 (x) is compared to the
11 Exposure in the prior Line of Data 102 (x-1). If there is no Exposure on line x-1, 0 is inserted in the
12 New Value Used 517 column on Line x. If Exposure exists on Line x-1, to the extent that the New
13 Value Available 516 on line x does not exceed the Exposure on line x-1, the entire amount of New
14 Value Available 516 is copied and inserted in the New Value Used 517 column on Line x. If
15 Exposure exists on Line x-1 that does not exceed the New Value Available 516 on Line x, then the
16 Exposure on Line x-1 will be inserted in the New Value Used 517 column on Line x. The formula
17 in the first line of this column should be checked to make sure its reference to a previous line does
18 not provide inaccurate results for the first line of calculations.

19 To calculate the values in the New Value Not Used Column 518, for any Line of Data 102,
20 the New Value Used 517 is subtracted from the New Value Available 516.

21 To calculate the values in the Exposure column for any Line of Data 102 x, the Exposure on
22 Line x-1 is added to the Invoice Amount 112 in the fourth column on Line x, and from this sum, the
23 New Value Used 517 amount for Line x is subtracted. The formula in the first line of this column

1 should be checked to make sure its reference to a previous line does not provide inaccurate results
2 for the first line of calculations.

3 In the SNV Defense totalization step **560**, the values in the Invoice Amount **112** in the fourth
4 column, the New Value Available **516** column, the New Value Used **517** column and the New Value
5 Not Used **518** Column are added at the bottom of each of those four columns to demonstrate the
6 affect of applying the SNV Defense and the Recipient's Exposure to the Claim after applying the
7 SNV Defense.

8 In the SNV reconciliation step **565**, the totals of the New Value Used **517** column and the
9 New Value Not Used **518** column are added together to demonstrate that the sum reconciles with
10 the total of the New Value Available **516** column. The totals of the New Value Used **517** column
11 and the Exposure column are added together to demonstrate that the sum reconciles with the total
12 of the Amount of Preference Payments Received column.

13 A depiction of a presentation of Preference Period Data after applying the SNV Defense in
14 general terms is shown at Fig. 20. Reference Number **109** may be an alpha/numeric character to
15 represent a reference number related to any particular Invoice Number **111** or Preference Payment.
16 Invoice Number **111** may be an alpha/numeric character to represent an Invoice Number. Provided
17 Date **113** may be a date in any known date format. Invoice Amount **112** may be a value in any
18 known value format, preferably a currency format. Original Data Payment Date/Replicated Data
19 Provided Date **114** may be a date in any known date format. New Value Reference Number **503**
20 may be an alpha/numeric character to represent a reference number related to any particular invoice
21 or Preference Payment. New Value Invoice Number **511** may be an alpha/numeric character to
22 represent an Invoice Number. New Value Invoice Amount **512** may be a value in any known value
23 format, preferably a currency format. New Value Available **516** requires the same value as in the

cell in the column to its left (Column H in Fig. 20) (or zero if there is no value in that cell). New Value Used 517 requires the result of a formula where if New Value Available 516 is greater than the Exposure on the previous line, then input the Exposure from the previous line, otherwise, input the value of the New Value Available 516. New Value Not Used 518 requires the result of a formula that subtracts New Value Used 517 from New Value Available 516. Exposure requires the result of a formula that adds the Original Data Invoice Amount 112 (the amount in Column D of Fig. 20) to the Exposure from the previous line, and subtract from that sum the New Value Used. A depiction of a presentation of Preference Period Data after applying the SNV Defense is shown at Fig. 21 in a spreadsheet format that describes the relationships between the assigned rows and columns used, to calculate the resulting Exposure. For the algorithms of Fig. 21, New Value Used 517 requires the result of a formula where if New Value Available is greater than the Exposure on the previous line, then input the Exposure from the previous line, otherwise, input the value of the New Value Available. For example,

Formula J33: =IF(I33>L32,L32,I33)
Formula J34: =IF(I34>L33,L33,I34)
Formula J35: =IF(I35>L34,L34,I35)

New Value Not Used 518 requires the result of a formula that subtracts New Value Used from New Value Available. For example, K33=+I33-J33. Exposure requires the result of a formula that adds the Original Data Invoice Amount (the amount in column D) to the Exposure from the previous line, and subtract from that sum the New Value Used. For example, Formula L33: +L32+D33-J33. Fig. 22 provides a depiction of a presentation of Preference Period Data and Exposure after applying the SNV Defenses using sample actual values.

Fig. 22(a) provides a depiction of an alternative method of presenting Preference Period Data after applying the SNV Defense using sample values where no Reference Numbers 109 are shown.

1 The Invoice Numbers 111 related to the Preference Payment Payment Dates 114 and the New Value
2 Provided Dates are shown in the same column. The Preference Payment Payment Dates 114 and
3 the New Value Provided Dates are shown in separate columns, and New Value Available 516 is not
4 shown until after the date the first Preference Payment was made. For illustrative purposes, in Fig.
5 22(a), the New Value represented by Invoice Number 226 and provided on April 30, 2001 is shown
6 to have occurred prior to the Preference Payment being made on April 30, 2001 (note that this is an
7 alternative to the preferred method of placing the New Value Provided Date prior to Preference
8 Payment Payment Date if both occur on the same day).

9 **Combine and Calculate the Ordinary Course of Business** 10 **and Subsequent New Value Defenses**

11 Fig. 7 depicts a block diagram illustrating a preferred embodiment for the process of
12 calculating the application of both the OCB and SNV Defenses 70 of Fig. 1.

13 Combined OCB/SNV Payment Time calculation step 610 uses the Preference Period Data
14 columns of Reference Number 109 (assuming Reference Number already created), Invoice Number
15 111, Provided Date 113, Invoice Amount 112 and Payment Date 114, sorted by Payment Date 114
16 in ascending chronological order and including those Lines of Data that represent goods and services
17 provided within the Preference Period but never paid for. If not already calculated, the Payment
18 Times 116 for each Line of Data 102 are calculated and included in a column to the right of the
19 existing five columns.

20 In OCB/SNV Reference Numbering step 615, if not already done, a new column is created
21 and numbers each Line of Data 102 with a Reference Number 109 in ascending order. The
22 Reference Numbers 109 may be italicized or otherwise distinguishable from the other data for easy
23 reference. This allows a Recipient to track the data related to any Invoice Number 111 by using the

1 Reference Number 109, not the cumbersome Invoice Number 111, which may be difficult to
2 visually distinguish from other Invoice Numbers 111. While any method of calculating and
3 combining the OCB and SNV Defenses may be used, it is contemplated that the following steps will
4 be used for such calculation.

5 In OCB/SNV data replication step 620, the Preference Period data is copied and replicated
6 below the original data. Those Lines of Data 102 that represent goods and services provided within
7 the Preference Period but not paid are removed from the original (non-replicated) data because they
8 were not Preference Payments because the Debtor never paid for those goods or services. The
9 replicated data may be bolded or otherwise distinguishable from the original data for easy reference.

10 In OCB/SNV data formatting step 625, the replicated data is reorganized so that the
11 replicated New Value Provided Date is lined up in the same column as the original Payment Date
12 114 and the other columns of replicated data are named New Value Reference Number, New Value
13 Invoice Number, New Value Invoice Amount, New Value Payment Date and New Value Payment
14 Time, and are placed into five newly created columns following the existing six columns. All
15 existing columns of data are then sorted by the original Payment Date 114/New Value Provided
16 Date column in ascending order so that the New Value Provided Dates are inserted chronologically
17 into the chronological Payment Dates 114, and New Value Provided Dates are placed after Payment
18 Dates 114 if such dates are the same. A new column, the Protected by Ordinary Course of Business
19 611 column, is added after the replicated New Value Payment Time 116 column, which will indicate
20 the value of each Preference Payment that is protected by the OCB Defense.

21 In OCB protection step 640, for each Assumed Payment Time 404 and Day Spread 403 used
22 in the calculation of the OCB Defense, which as noted above may be 132 different scenarios or more
23 or less, the lower end and the upper end of the OCB Protected Range is determined. The Assumed

1 Payment Time **404**, Day Spread **403**, lower end of the OCB Protected Range and upper end of the
2 OCB Protected Range are displayed above the title of the added Protected by OCB Defense **611**
3 column or at any other appropriate location. For each Line of Data **102**, the Payment Time **116** is
4 compared to the lower end of the OCB Protected Range and the upper end of the OCB Protected
5 Range, and if the Payment Time **116** is not less than the lower end of the OCB Protected Range
6 and is not greater than the upper end of the OCB Protected Range, the Invoice Amount **112** related
7 to that Preference Payment is copied to the Protected by OCB Defense **611** column. If the Payment
8 Time **116** is less than the lower end of the OCB Protected Range or greater than the upper end of
9 the OCB Protected Range, then 0 is entered in the Protected by Ordinary Course of Business **611**
10 column.

11 In SNV protection step **650**, four columns, New Value Available **516**, New Value Used **517**,
12 New Value Not Used **518**, and Exposure after OCB and SNV Defenses Applied are added to the
13 right of the existing columns. To calculate the values in the New Value Available **516** column, for
14 each replicated Line of Data **102**, the New Value Payment Time **616** is compared to the lower end
15 of the OCB Protected Range and the upper end of the OCB Protected Range and if the New Value
16 Payment Time **616** is less than the lower end of the OCB Protected Range or is greater than the
17 upper end of the OCB Protected Range, the New Value Invoice Amount **512** is copied into the New
18 Value Available **516** Column. If the New Value Payment Time **616** is not less than the lower end
19 of the OCB Protected Range or greater than the upper end of the OCB Protected Range, then 0 is
20 entered in the New Value Available **516** Column. For example, if the Assumed Payment Time **404**
21 is 50 days and the Day Spread **403** is 5, the OCB Protected Range will be from 45 to 55 days, a
22 New Value Payment Time **616** of 57 days would not be protected by the OCB Defense, the
23 Preference Payment related to that New Value Payment Time **616** of 57 days may be subject to the

1 SNV Defense, and the related New Value Invoice Amount **512** would be inserted into the New
2 Value Available **516** column.

3 To calculate the values in the New Value Used **517** column, the New Value Available **516**
4 for any Line of Data **102** (x) is compared to the Exposure in the prior Line of Data **102** (x-1). To
5 the extent that the New Value Available **516** on line x does not exceed the Exposure on line x-1, the
6 entire amount of New Value Available **516** is copied and inserted in the New Value Used **517**
7 column on Line x. If Exposure exists on Line x-1 that does not exceed the New Value Available
8 **516** on Line x, then the Exposure on Line x-1 will be inserted in the New Value Used **517** column
9 on Line x. Thus, if the Exposure on Line x-1 equals 0, 0 is inserted in the New Value Used **517**
10 column on Line x.

11 To calculate the values in the New Value Not Used Column **518**, for any Line of Data **102**,
12 the New Value Used **517** is subtracted from the New Value Available **516**.

13 In the combined OCB/SNV analysis step **670**, to calculate the values in the Exposure column
14 for any Line of Data **102** x, add the Exposure on Line x-1 to the Invoice Amount **112** in the fourth
15 column on Line x, and from this sum subtract the Protected by Ordinary Course of Business amount
16 on Line x and subtract the New Value Used amount on Line x. Add the values in each of the
17 separate columns titled Invoice Amount, the Protected by Ordinary Course of Business **611**, New
18 Value Available **516**, New Value Used **517** and the New Value Not Used **518** and display the total
19 at the bottom of each column so that the Recipient will understand the affect of applying the OCB
20 and SNV Defenses together and will know the Recipient's Exposure to the Claim after applying
21 these Defenses.

22 In the OCB/SNV reconciliation step **680**, add totals of the New Value Used **517** column and
23 the New Value Not Used **518** Column and reconcile that sum to the total of the New Value

Available **516** column. Add totals of the Protected by Ordinary Course of Business **611**, New Value Used **517**, and Exposure columns and reconcile the sum to the total of the Invoice Amount **112** column.

A depiction of a presentation of Preference Period Data after combining and applying the OCB and SNV Defenses in general terms is shown at **Fig. 23**. Assumed Payment Time **404** may be any numeric character (may be imported from other part of spreadsheet calculated by the invention, or manually inserted). Day Spread **403** may be any numeric character (may be imported from other part of spreadsheet calculated by the invention, or manually inserted). Lower End of OCB may be numeric character resulting from subtracting Day Spread from Assumed Payment Time. Upper End of OCB may be numeric character resulting from adding Day Spread to Assumed Payment Time. Reference Number **109** may be an alpha/numeric character to represent a reference number related to any particular invoice or Preference Payment. Invoice Number **111** may be an alpha/numeric character to represent an Invoice Number. Provided Date **113** may be a date in any known date format. Invoice Amount **112** may be a value in any known value format, preferably a currency format. Original Data Payment Date/New Value Provided Date **114** may be a date in any known date format that represents the Payment Date of Preference Payments (unbolded) or the Provided Date of all goods or services provided within the Preference Period (bolded). Payment Time **116** requires the result of a formula subtracting Provided Date from Payment Date and displaying the result in numeric form, preferably as an integer. New Value Reference Number may be an alpha/numeric character to represent a reference number related to any particular invoice or Preference Payment. New Value Invoice Number **511** may be an alpha/numeric character to represent an Invoice Number. New Value Invoice Amount **512** may be a value in any known value format, preferably a currency format. New Value Payment Date **514** may be a date in any known

1 date format that represents the Payment Date of Preference Payments. New Value Payment Time
2 616 requires the result of a formula subtracting new Value Provided Date from New Value Payment
3 Date and displaying the result in numeric form, preferably as an integer. Protected by OCB 611
4 requires the result of a formula comparing the Payment Date with the Upper and Lower Ends of the
5 OCB Protected Range and inputting the Invoice Amount if the Payment Time falls within the OCB
6 Protected Range and inputting zero if the Payment Time falls outside the OCB Protected Range.
7 New Value Available 516 requires the result of a formula comparing the New Value Payment Date
8 with the Upper and Lower Ends of the OCB Protected Range and inputting the New Value Invoice
9 Amount if the new Value Payment Time falls within the OCB Protected Range and inputting zero
10 if the New Value Payment Time falls outside the OCB Protected Range. New Value Used 517
11 requires the result of a formula where if New Value Available is greater than the Exposure on the
12 previous line, then input the Exposure from the previous line, otherwise, input the value of the New
13 Value Available. New Value Not Used 518 requires the result of a formula that subtracts New
14 Value Used from New Value Available. Exposure requires the result of a formula that adds the
15 Invoice Amount (the amount in column D) to the Exposure from the previous line, and subtract from
16 that sum the New Value Used.

17 A depiction of a presentation of Preference Period Data after combining and applying the
18 OCB and SNV Defenses is shown at Fig. 23 in a spreadsheet format that describes the relationships
19 between the assigned rows and columns used, to calculate the resulting Exposure. For the
20 algorithms of Fig. 23, Payment Time requires the result of a formula subtracting Provided Date from
21 Payment Date and displaying the result in numeric form, preferably as an integer. New Value
22 Payment Time requires the result of a formula subtracting New Value Provided Date from New
23 Value Payment Date and displaying the result in numeric form, preferably as an integer. Protected

by OCB requires the result of a formula comparing the Payment Date with the Upper and Lower Ends of the OCB Protected Range and inputting the Invoice Amount if the Payment Time falls within the OCB Protected Range and inputting zero if the Payment Time falls outside the OCB Protected Range. For example,

Formula L44: = IF(F44>=\$L\$4,IF(F44<=\$L\$5,D44,0),0)

Formula L45: = IF(F45>=\$L\$4,IF(F45<=\$L\$5,D45,0),0)

New Value Available requires the result of a formula comparing the New Value Payment Date with the Upper and Lower Ends of the OCB Protected Range and inputting zero if the New Value Payment Time falls within the OCB Protected Range and inputting the New Value Invoice Amount if the New Value Payment Time falls outside the OCB Protected Range. For example,

Formula M44: =IF(K44>=\$L\$4,IF(K44<=\$L\$5,0, I44), I44)

Formula M45: =IF(K45>=\$L\$4,IF(K45<=\$L\$5,0, I45), I45)

New Value Used requires the result of a formula where if the Exposure on the previous line is greater than New Value Available, then input the value of the New Value Available, otherwise, input the Exposure from the previous line. For example,

Formula N44: =IF(P43>M44,M44,P43)

Formula N45: =IF(P44>M45,M45,P44)

New Value Not Used requires the result of a formula that subtracts New Value Used from New Value Available. For example,

Formula O44: = +M44-N44

Formula O45: = +M45-N45

Exposure requires the result of a formula that adds the Invoice Amount (the amount in Column D) to the Exposure from the previous line, and subtract from that sum the Protected by OCB Defense and New Value Used.

Formula P44: = +P43+D44-L44-N44

1 Formula P45: = +P44+D45-L45-N45

2 A depiction of the original data (related to Preference Payments) to be used in combining
3 and applying the OCB and SNV Defenses, the total Invoice Amounts of which will equal the total
4 Invoice Amounts 112 in an analysis, such as in Figs. 26(a), 26(b), and 26(c), is shown at Fig. 24.
5 This figure uses a hypothetical preference period running from April 18, 2001 through July 16, 2001
6 and sorts the lines of data 102 by payment date 114, excluding goods or services provided within
7 the preference period. A depiction of the replicated data (related to Subsequent New Value) to be
8 used in combining and applying the OCB and SNV Defenses, the total Invoice Amounts 112 of
9 which will equal the total New Value Invoice Amounts 512 in an analysis, such as in Figs. 26(a),
10 26(b), and 26(c), is shown at Fig. 25 and includes goods or services provided within the preference
11 period. Fig. 25 also uses a hypothetical preference period running from April 18, 2001 through July
12 16, 2001 and sorts the lines of data 102 by payment date 114.

13 A depiction of a full presentation of Preference Period Data after combining and applying
14 the OCB and SNV Defenses using sample values and assuming an Assumed Payment Time 404 of
15 49 days and a Day Spread 403 of 5 days is shown at Fig. 26(a). A depiction of a full presentation
16 of Preference Period Data after combining and applying the OCB and SNV Defenses using sample
17 values and assuming an Assumed Payment Time 404 of 44 days and a Day Spread 403 of 3 days
18 is shown at Fig. 26(b). A depiction of a full presentation of Preference Period Data after combining
19 and applying the OCB and SNV Defenses using sample actual values and assuming an Assumed
20 Payment Time 404 of 48 days and a Day Spread 403 of 10 days is shown at Fig. 26(c). It is
21 contemplated that the invention can be produced in a format that automatically calculates results for
22 a large range of assumed values for Assumed Payment Time 404 and Day Spread 403 by
23 spreadsheet, database or other software based means as are known in the art. It is further

1 contemplated that the invention can be produced in a format that allows manual input of Assumed
2 Payment Time 404 and Day Spread 403.

3 **Preparing Comprehensive Results**

4 In OCB/SNV presentation step , the results of each combination of OCB and SNV Defenses
5 for each assumption of Assumed Payment Time 404 and Day Spread 403 can be input into a two-
6 dimensional chart, one axis of which will represent the variable the Assumed Payment Time 404
7 and the other axis of which will represent the variable the Day Spread 403, and for each result,
8 indicate the OCB Protected Range . The intersection of each variable will provide the Exposure
9 After Applying the Ordinary Course of Business and Subsequent New Value Defenses for those
10 assumed values of the variables.

11 A depiction of a full presentation of the results of each combination of OCB and SNV
12 Defenses for each assumption of Assumed Payment Time 404 and Day Spread 403 in a two-
13 dimensional chart (the values being pulled from the results of applying each set of assumptions)
14 using sample values is shown at Fig. 27. For any analysis, such as the three shown in Figs. 26(a),
15 26(b), and 26(c), such analyses may be displayed.

16 **Other Embodiments of the Invention**

17 In data preparation step 110, it is contemplated that any data related to, or method of
18 distinguishing, Preference Payments that could be used to determine whether a Preference Payment
19 was paid within the OCB may be used. For example, data indicating that some Preference Payments
20 were paid by check while other were paid by wire transfer may be used if such distinction could be
21 the basis of determining whether a Preference Payment was paid within the OCB or not.

1 In data preparation step 110, any other data that may be helpful in distinguishing each Line
2 of Data or in understanding the data, either at this step or in any subsequent step or output display,
3 may be included in the data at this time or at any other time.

4 In data splitting step 125, it is contemplated that Provided Dates 113 in the Pre-Preference
5 Period that were paid after the Petition Date may, but not need, be included in the Pre-Preference
6 Period data. Such data will likely later be removed from the Pre-Preference Period data as being
7 paid outside the OCB.

8 In data splitting step 125, it is contemplated that Provided Dates 113 in the Preference Period
9 that were paid after the Petition Date (the date on which a bankruptcy petition related to a Debtor
10 was filed) may, but not need, be included in the Preference Period data.

11 In display step 150, the invention contemplates presenting the resulting Pre-Preference
12 Period Data and Preference Period Data in a readable format in ascending order by Payment Date
13 114. The invention also contemplates presenting the resulting Pre-Preference Period Data and
14 Preference Period Data in any format including sorted by Invoice Amount 112, Invoice Date 111,
15 Provided Date 113 or Payment Date 114 in ascending or descending order.

16 In CENV Payment Time selection step 210, the invention may be set to calculate CENV
17 Payment Time or Times using pre-determined calculations. For example, the invention may use
18 a predetermined number, such as 2, or range of numbers, such as 0, 1, 2 and 3, as the CENV Time
19 so that no manual determination of CENV Time is necessary.

20 In CENV Payment Time selection step 210, an invention user may choose any CENV
21 Payment Time or Times he or she believes is appropriate, including those that fall outside any range
22 chosen by the user or created automatically by the invention.

1 Prior to step 210, if the Preference Period Data is not already in the invention due to the
2 manipulations to the original data, the Preference Period Data may be imported or input into the
3 invention so that the following steps may be taken.

4 In CENV result display step 260, the invention contemplates that multiple results of the
5 application of the CENV Defense, caused by using multiple CENV Times , may be used in
6 subsequent applications of the invention.

7 In historical period determination step 335, assuming the necessary data exists, the invention
8 may create one or more pre-determined Historical Periods without input from a user.

9 In OCB data sorting step 410, for calculating the OCB Defense, the Preference Period data
10 used may be the unmodified original Preference Period data with no other Defenses yet applied or
11 may be the Preference Period data that has been modified by other Defenses having been applied
12 to that data.

13 In OCB payment time selection step 420, it is contemplated that one of the Assumed
14 Payment Times 404 used in calculating the OCB Defense will include the most appropriate
15 Historical Average Payment Times 303. If the invention user has no Historical Period data or
16 chooses not to use available Historical Periods , the invention user may use Preference Period Data
17 or any other method to determine the Assumed Payment Time(s) 404.

18 In OCB recalculation step , it is contemplated that all Assumed Payment Times 404 that may
19 be useful in understanding application of Defenses or in negotiation will be included in the range
20 of Assumed Payment Times 404 discussed in step , including the most appropriate Historical
21 Average Payment Times 303 and any other appropriate Assumed Payment Time 404 however
22 determined. If the invention user has no Historical Period data or chooses not to use available

1 Historical Periods , the invention user may use Preference Period Data or any other method to
2 determine the Assumed Payment Time(s) 404.

3 In SNV data sorting step 505, Reference Numbers 109 may or may not be used in calculating
4 the SNV Defense.

5 In step 510, columns in the replicated data need not be separated from the original data,
6 although it is easier to understand if the columns are separated and, regardless of method used, it is
7 suggested that the replicated data is distinguished in some way from the non-replicated data.

8 In the SNV data sorting step 520, it is contemplated that Provided Dates 113 need not be
9 placed after Payment Dates 114 if such dates are the same.

10 In OCB/SNV data replication step 620, those Lines of Data 102 that represent goods or
11 services provided within the Preference Period but were not paid need not be removed from the
12 original data, but may be retained in the data for demonstrative purposes. If those Lines of Data 102
13 are removed, they should be placed into the memory so that they may be indicated in the results as
14 removed.

15 In step 625, it is contemplated that Provided Dates 113 need not be placed after Payment
16 Dates 114 if such dates are the same.

17 In step 625, the Payment Date 114/New Value Provided Date column may be split into two
18 separate columns, Payment Date 114 and New Value Provided Date, for display purposes.

19 In OCB protection step 640, the Assumed Payment Time 404, Day Spread 403 and OCB
20 Protected Range that correspond to the results related thereto may be placed in any useful place
21 within the data and need not be displayed.

1 **Other Embodiments**

2 **In General:**

3 Specific embodiments mentioned above are applicable to any step to which the specific
4 embodiment may apply, regardless of whether that step is specifically referenced. Specific
5 embodiments mentioned above do not restrict any of the general other embodiments discussed here.
6 In general, for example, in invoice reconciliation step 140 and Historical Period data display step
7 , the invention adds total Invoice Amounts 112 for the Pre-Preference Period and the total Invoice
8 Amounts 112 for the Preference Period such that the total of the Invoice Amounts 112 can be
9 reconciled with the total Invoice Amounts 112 from the original data. The invention contemplates
10 other methods of reconciling the manipulated data to the original data in order to ensure that all
11 original data was included in the manipulations, such as adding all of the Invoice Numbers 111,
12 Provided Dates 113 or Payment Dates 114 or by other means.

13 It is generally understood that the same portion of a Preference Payment may not be reduced
14 by more than one Defense, that is, that once a Defense protects a Preference Payment (or portion
15 thereof) and thus decreases Exposure, another Defense cannot be applied to further reduce Exposure
16 by that same Preference Payment (or portion thereof). However, some practitioners believe that
17 this is acceptable in certain circumstances. The invention contemplates that either interpretation of
18 the Code and the law may be made.

19 The Code indicates that only if no other Defense applies to shield a Preference Payment can
20 the SNV Defense be applied. Nevertheless, the Invention contemplates that the SNV Defense need
21 not be applied last in order.

22 For each separate step described in the invention, manipulations described in previous steps
23 can be inserted into future steps if the previous step is unused. Steps that are repeated, such as

1 determining Payment Times in the Manipulation of Data section and the OCB Defense section, need
2 not be repeated.

3 It is contemplated that application of Defenses and manipulations and calculations related
4 thereto maybe performed in any order a user may elect. Any interpretation of the Code and related
5 law may be used when using the invention, and the use of the invention is not restricted to those
6 methods recognized by the Code and related law. For example, some practitioners interpret the
7 Code and law to mean that for the SNV Defense to be applicable, the new value provided must
8 remain unpaid, and the invention contemplates this interpretation. For another example, some
9 practitioners read the Code and related law as allowing the application of the "net result rule" that
10 allows, when applying the SNV Defense, Exposure to decrease below zero; the invention
11 contemplates its use making such interpretation. For another example, some practitioners interpret
12 the Code and related law to mean that SNV may not be applied to any Preference Payment other
13 than the single Preference Payment immediately prior to the SNV provided, and the invention
14 contemplates its use making such interpretation. In each example, and in any other interpretation
15 of the Code and related law, the invention contemplates using any and all interpretations of the Code
16 and/or related law.

17 The descriptions of the ordering of data, be it in columns, rows or otherwise, whether for
18 display or not, are simply one way of ordering and manipulating the data. Any method of ordering
19 and manipulating data may be used. For example, the column headings in any of the **Figs. 8 - 27**
20 may be rearranged or renamed. Other columns helpful to the calculation and understanding of the
21 invention may be added and columns may be removed. For another example, in data sorting step
22 **120** (the splitting of the data into Preference Period and Pre-Preference Period data), the invention

1 may sort the data in descending order or in any other way that would help yield the result sought or
2 to display the results in a meaningful way.

3 It is contemplated that numerous reconciliation points may be used to verify that the data
4 used in any previous step has been manipulated properly in the current step. For example, invoice
5 totaling step 130 indicates one such reconciliation point, where the invention adds total Invoice
6 Amounts 112 for the Pre-Preference Period and the total Invoice Amounts 112 for the Preference
7 Period such that the total of the Invoice Amounts 112 can be reconciled with the total Invoice
8 Amounts 112 from the original data. While some of those reconciliation points are indicated, it is
9 contemplated the invention recognizes that any reconciliation point that would be helpful to verify
10 that the data has been correctly manipulated and calculated may be used. For example, if it would
11 be helpful to verify that the number of Invoice Numbers 111 in the Preference Period created in data
12 splitting step 125 matches the number of Invoice Numbers 111 in the Preference Period used in
13 combined OCB/SNV Payment Time calculation step 610, such a reconciliation point may be created
14 and used. Likewise, the Preference Period Invoice Numbers 111, Invoice Amounts 112, Provided
15 Dates 113 and Payment Dates 114 may all be used as reconciliation points since they may all be
16 recognized by the invention as numeric values, added together and compared with the same sums
17 at any point of the manipulations and calculations of the invention to verify that all pieces of data
18 are included in later steps.

19 It is contemplated that any of the steps of the invention that utilize automatic data
20 manipulation, automatic calculations, or automatic determinations of variables may be circumvented
21 by manual processes or skipped if appropriate. For example, for the CENV Defense, CENV
22 Payment Time selection step 210 through CENV result display step 260 may be circumvented by
23 manually determining the result of applying Payment Time selection step 210 through CENV result

1 display step 260. For another example, in step 640, rather than having the invention determine
2 which Payment Times 116 fall outside the OCB Protected range, such determination can be
3 performed manually. For another example, in step 640, entering the result of the previous step in
4 the Protected by OCB Defense column can be done manually. For another example, in step 650,
5 values in the New Value Available 516, New Value Used 517 and New Value Not Used 518
6 columns may be manually determined and inserted. For another example, in the combined
7 OCB/SNV analysis step 670, Exposure amounts may be inserted manually, including in those
8 situations where the Exposure falls below 0 such that 0 must be inserted in the Exposure column.

9 Any step requiring the manipulation or removal of a piece of data or Line of Data 102 that
10 may be accomplished automatically by the invention may be accomplished manually by the use of
11 highlighting such piece of data or Line of Data 102 in any manner or method, including highlighting
12 such using a mouse and clicking on such, using keyboard keys, or by inserting a new column and
13 clicking or inserting an alpha/numeric character into that new column to indicate that such piece of
14 data or Line of Data 102 is to be manipulated or removed.

15 Any appropriate data may be input at any step, regardless of whether that data is a product
16 of any steps of the invention or produced by any other method or provided by any Source.

17 Any step or series of steps may be used independently of any other step or series of steps.
18 For example, the OCB Defense may be independently applied to data without the utilization of any
19 other steps of the invention. For another example, the CENV or SNV Defenses may be applied to
20 data independently without the utilization of any other steps of the invention.

21 While the invention contemplates the appropriate number of steps to properly display useful
22 output and condenses certain steps into one step, it is contemplated that, depending on the invention

1 user's needs or for any other reason, more or fewer steps may be used in order to allow better
2 understanding of the manipulations, calculations and results of the invention.

3 Reference Numbers 109 may be inserted at any appropriate point, such as at data preparation
4 step 110, but it is believed that Reference Numbers 109 are better used only for Preference Period
5 data as contemplated by the invention at OCB/SNV Reference Numbering step 615, and they need
6 not be used at all.

7 If certain steps are skipped, the appropriate steps necessary to perform later data
8 manipulations, calculations or results are not ignored. For example, in combined OCB/SNV
9 Payment Time calculation step 610, if the Payment Time 116 has not been calculated because
10 Payment Time Calculation step 305 through Historical Period data display step have been skipped,
11 the Payment Times 116 within the Preference Period would necessarily have to be calculated.

12 Reference to "amount of payments" is the value of the payment received, whether that
13 payment is a Preference Payment or not, which is the Invoice Amount 112 of the Line of Data 102
14 related to any payment.

15 The invention contemplates all useful or informative formats of output results and summaries
16 thereof, whether displayed in combination with other output results or separately.

17 It is contemplated that explanatory descriptions of output results may be used in combination
18 with the output results, whether displayed in combination with output results or separately. Such
19 explanatory descriptions may be added manually by a user or may be automatically inserted by the
20 invention.

21 Any output display may be modified, condensed or expanded into any useful format. For
22 example, the output may be modified to show only one line for each Payment Time so that the two

1 Lines of Data whose Payment Times are 44 days will be combined into one Line of Data for Display
2 Purposes.

3 The embodiment of the invention described herein assumes that other Defenses are applied
4 prior to the application of the OCB and SNV Defenses, whether applied separately or combined.
5 Changes in assumptions made to Defenses other than the OCB and SNV Defenses will likely affect
6 the data used in the application of the OCB and SNV Defenses. The invention contemplates that
7 to the extent assumptions must be made to apply Defenses other than the OCB and SNV Defenses,
8 numerous assumptions, including a range of assumptions, may be made prior to the application of
9 any Defenses such that numerous data sets may be used in applying the OCB and SNV Defenses.
10 For example, when applying the CENV Defense, one may choose a range of 0 to 5 days for the
11 assumption of the appropriate CENV Time. Choosing this range may result in six different
12 Exposure results and six different data sets to which the OCB and SNV Defenses may apply. The
13 invention contemplates providing multiple results based on numerous assumptions made to Defenses
14 other than OCB and SNV Defenses as well as numerous assumptions made in applying the OCB
15 Defense.

16 In any SNV Defense application, be it separate or combined with any other Defense, those
17 Lines of replicated Data related to Payment Dates prior to the first Preference Payment may be
18 removed from the output results, since no New Value may be applied prior to the first Preference
19 Payment. Likewise, any Lines of replicated Data that relate to Payment Dates that occur after a
20 Preference Payment, but do not reduce Exposure, may be removed from the output results for
21 illustrative purposes.

22 It is contemplated that only those Lines of Data affecting a Recipient's Exposure may be
23 shown as output results.

